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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,290	03/26/2004	Tetsuro Takizawa	17586	2185
23389 7590 01/10/2008 SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			EXAMINER PEIKARI, BEHZAD	
			ART UNIT 2189	PAPER NUMBER.
			MAIL DATE 01/10/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/811,290

Applicant(s)

TAKIZAWA, TETSURO

Examiner

B. James Peikari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The specification is objected to because "Publication" should replace "Laid-Open" on page 1.

Applicant's cooperation is requested in correcting any similar errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

2. The previous rejections under 35 U.S.C. 112 are withdrawn due to the amendment filed on October 15, 2007.

### ***Claim Rejections - 35 USC § 102***

3. The previous rejections under 35 U.S.C. 102 are withdrawn due to the amendment filed on October 15, 2007.

### ***Claim Rejections - 35 USC § 103***

4. The previous rejections under 35 U.S.C. 103 are withdrawn due to the amendment filed on October 15, 2007.
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schumann et al., U.S. 5,889,714.

Schumann et al. teach the claimed invention including a memory controller 20 ("*memory control unit*") that uses a history register to keep track of a number of prior access to each bank of memory so that accesses from a CPU 12 ("*memory master*") can be optimized by a control logic element 24 ("*hit predicting unit*") such that memory areas are either left active ("*open*") or are closed at the end of each transfer, based on the entries in the history register.

Schumann et al. did not explicitly mention access to a same page, but instead was concerned with rows. However, it would have been obvious to one having ordinary skill in the art to have included pages as the "given group of memory locations" (see column 1, lines 32-33) in the system of Schumann et al., since pages could have contained several rows and it would have been obvious to control access to larger or smaller memory areas in such a system.

Schumann et al. did not specifically mention each of the permutations for judging how to respond to a given history determination as disclosed in the various claims. However, it would have been obvious to one having ordinary skill in the art to have included such permutations in the system of Schumann et al., as described in each of the claims, since Schumann et al. was flexibly designed to accommodate a number of

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such permutations. In fact, Schumann et al. stated that "The precharge enable logic signal is not asserted if the row address has been the same for a predetermined number of previous accesses" and "The precharge policy logic can also be designed such that more recent row address matches are weighted more heavily" and "it can be designed to favor certain patterns of row address matches", note column 2. More significantly, Schumann et al. stated in column 8 that "*There are numerous other possible designs for the prediction logic 245*". For example, the prediction can be based on a history register containing more history bits, or additional history information can be kept, such as whether the access was a read or write, or how much time elapsed between successive accesses, or whether the accesses were originated from the CPU or from the DMA controller". [Emphasis added].

### ***Response to Amendment***

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Because of the particular relevance of these references to the present claims, applicant is strongly encouraged to consider each reference prior to formulating any response to this Office action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Peikari whose telephone number is (571) 272-4185. The examiner is generally available between 7:00 am and 7:30 pm, EST, Monday through Wednesday, and between 5:30 am and 4:00 pm on Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon, can be reached at (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197 (toll-free).



B. James Peikari  
Primary Examiner  
Art Unit 2189  
1/7/08